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12/19/06

Raymond J. Vivacqua

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	10/717,417
Filing Date:	11/19/2003
Applicant:	Patrick M. Gibson
Group Art Unit:	3682
Examiner:	Vicky A. Johnson
Title:	HYDRAULIC FLUID STORAGE APPARATUS FOR A TRANSMISSION
Attorney Docket:	GP-302907

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

Sir:

In response to the Office Action mailed on 09/19/2006, please amend the application as follows and consider the remarks set forth below.

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AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0018] with the following paragraph rewritten in amendment format:

[0018] One such reason for returning the fluid to the reservoir 16 might be a rapid deceleration of the vehicle, where, as speed is reduced, more oil is stored in transit and higher sump levels will be required to keep the hydraulic pump primed. In this case, the centrifugal dam effect will be reduced as speed drops, releasing more of the fluid stored in the reservoir for use in the primary sump. In other conditions, a reduction in operating temperature will also reduce the fluid level within the sump 16 again reducing the centrifugal force created on the hydraulic fluid and allowing the fluid in the sump 18 to return to the sump 16 ~~14~~.

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AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A hydraulic fluid storage apparatus for a transmission comprising:

a transmission housing;

a rotating transmission component supported in said housing;

a transmission sump secured to said housing to provide a fluid storage chamber;

a second fluid storage chamber disposed in fluid communication with said sump;

a pump for circulating hydraulic fluid in said transmission;

said rotating transmission component being operable to impose a centrifugal component to the fluid in an open passage between the sump and the second fluid storage chamber to create a flow restriction to interrupt fluid communication between said sump and said second fluid storage chamber to increase the fluid storage in said second fluid storage chamber and limit the fluid level in said sump to a predetermined maximum level.

2. (Original) The hydraulic fluid storage apparatus for a transmission defined in claim 1 further comprising:

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said second fluid storage chamber being disposed on said transmission housing at a level higher than said first storage chamber.

3. (Original) The hydraulic fluid storage apparatus for a transmission defined in claim 1 further comprising:

said rotating transmission component being continuously rotated during transmission operation.

4. (Original) The hydraulic fluid storage apparatus for a transmission defined in claim 1 further comprising:

said flow restriction including a hydraulic dam disposed between said first and second fluid storage chambers.

5. (Original) The hydraulic fluid storage apparatus for a transmission defined in claim 1 further comprising:

said flow restriction being reduced and said fluid in said second chamber returning to said first chamber when the speed of said rotating transmission component decreases below a predetermined value.

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AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheet" of drawings includes changes to Figures 1 and 2. The attached "Replacement Sheet," which includes Figures 1 and 2, replaces the original sheet.

Attachment: Replacement Sheet

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REMARKS

Claims 1-5 are now pending in the application. Claim 1 has been amended. The amendments to the claims contained herein are intended to be of equivalent scope as originally filed and therefore may not be narrowing amendments. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to for certain informalities. Applicant has attached revised drawings for the Examiner's approval. In the "Replacement Sheet", reference numeral "26" in Figures 1 and 2 has replaced reference numeral "12" in order to indicate the passage 26. Also, reference numeral "32" has been added to Figure 2 to indicate the hydraulic dam 32.

SPECIFICATION

The specification stands objected to for certain informalities. Applicant has amended the specification according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

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REJECTION UNDER 35 U.S.C. § 102

Claims 1-5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Schnitzer (2002/0053489). Reexamination in view of the amendments and following comments is respectfully requested.

Schnitzer discloses an oil sump 1 and an oil reservoir 2. A flow passage having a compensation valve 11 (or equalization valve 11) is provided between the oil sump 1 and the oil reservoir 2, as seen in Figures 1 and 2. Oil flows from the reservoir 2 to the oil sump 1 when the compensation valve 11 is opened. (Page 2, paragraphs [0020] and [0022]).

Claim 1 has been amended to recite that "said rotating transmission component being operable to impose a centrifugal component to the fluid in an open passage between the sump and the second fluid storage chamber to create a flow restriction to interrupt fluid communication between said sump and said second fluid storage chamber[...]". This "open passage" is described in the specification in paragraph [0014] and indicated by reference numeral 28 in Figures 1 and 2. The open passage 28 connects the sump 16 with the reservoir 18 and is where the hydraulic dam 32 is formed. Schnitzer does not disclose an "open passage" between fluid chambers as described in claim 1 of the present invention as the flow passage in Schnitzer is regulated by the compensation valve 11.

Schnitzer further discloses moving oil from the oil sump 1 into the oil reservoir 2 using the rotating gears 7. (Page 2, paragraph [0021]. As can be seen in Figure 2, the rotating gears 7 are disposed remotely from the flow

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passage having the compensation valve 11. Claim 1 of the present invention recites that the rotating component induces a centrifugal component on the fluid *in the open passage*. Schnitzer does not disclose this feature since the rotating gears 7 are not located proximate to the flow passage having the compensation valve 11. Any centrifugal component provided to the fluid by the rotating gears 7 in Schnitzer is near the open top of the reservoir 2 and not in the flow passage.

Finally, as noted above, claim 1 recites that a centrifugal component is provided to the fluid by a rotating component to create a flow restriction to interrupt fluid communication between the sump and the second fluid storage chamber. This flow restriction is the hydraulic dam 32 located within the passage 28 as seen in Figure 2 of the present invention and described in paragraph [0016]. Schnitzer does not disclose this feature. The rotating gears 7 in Schnizter do not create a flow restriction or a hydraulic dam anywhere within the assembly to restrict flow. Instead, flow restriction is controlled by opening or closing the compensation valve 11.

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